

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-4 and 7-10 are rejected under 35 U.S.C. 102(b) as being anticipated by Clouse (3822683).

Clouse discloses a fuel supply pump having a tappet structural body (Fig. 2) which includes a roller (32) and a tappet body portion (27) which houses a roller, wherein the roller is rotatably held by a roller receiver (31) of the tappet body portion and the fuel supply pump includes a plate-like (40) or a wire-like restricting means which restricts the movement of the roller in the rotary axis direction. Wherein the plate-like restricting means is constituted by extending a portion of a peripheral portion of a spring seat in the direction toward the end portion of the roller, the plate-like restricting means is inserted into an insertion hole (35) formed in the tappet body portion and a gap (not labeled) is formed around the plate-like restricting means in the insertion hole, and the plate-like restricting means includes a bent portion (47, 48) for supporting and receiving the roller. The roller includes a pin portion which constitutes the center of rotation of the roller and a roller portion which is a thick wall portion which is formed around the pin portion and is rotatable while being in a slide contact with a roller body and the pin portion and the roller portion are integrally formed. Wherein the fuel supply pump capable of

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use in a booster-type accumulator fuel injection device which pressurizes fuel having a flow rate per unit time of 500 to 1500 liter/hour to a value of 50MPa or more.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 5 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Clouse (3822683) in view of Steinmetz (6405698).

Clouse discloses a fuel supply pump as described above, but does not teach a wire-like restricting means formed of a spring member wound around the tappet body portion.

Steinmetz discloses a roller tappet having a wire-like restricting means (6) which restricts the movement of a roller (4) in the rotary axis direction formed of a spring member wound around the tappet body portion.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the restricting means of Clouse to be in the form of a wire-like restricting means formed of a spring member wound around the tappet body portion as taught by Steinmetz for the purpose of restricting movement of the roller in the direction of its axis.

In further regard to claim 6, it is common practice in the art of fastening to mate a tab portion with an insertion hole of the receiving member, such as with the pawl and roller receiver. It would have been obvious to one having ordinary skill in the fastening art to further modify the

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restricting means of Clouse to include a pawl portion at the ends of the wire-like restricting means for engagement with the roller receiver, as an engineering expedient for the purpose of creating a secure connection.

Allowable Subject Matter

Claim 6 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MICHAEL LESLIE whose telephone number is (571)272-4819. The examiner can normally be reached on M-F 8:00am - 4:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward Look can be reached on (571) 272-4820. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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ML
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**/Michael Leslie/
Primary Examiner, Art Unit 3745**